Institute of Environmental Sciences and Technology

IEST-RP-CC053.1

Contamination Control Division
Recommended Practice 053.1

Considerations for Robotics and Automation in Cleanrooms and Other Controlled Environments

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SECTION

Considerations for Robotics and Automation in Cleanrooms and Other Controlled Environments IEST-RP-CC053.1

1 SCOPE AND LIMITATIONS

1.1 Scope

This Recommended Practice (RP) provides appropriate contamination control considerations for the deployment of robotics in cleanrooms and other controlled environments. This information provided assists designers and users in the proper application of recommended principles for facility design and operations.

This RP is limited to the design and qualification of cleanroom and controlled environment robots. This document is not intended to provide safety specifications for robotic equipment. Computerization and validation of software is not a consideration for this RP.

This RP also addresses specific testing, commissioning, qualification for robots and robotic systems in their operational environment.

1.2 Limitations

This RP does not address robotic systems that are designed in production tools and equipment or robotic systems that have dedicated environments. Additionally, this RP does not address transport systems or elevator systems.

2 NORMATIVE REFERENCES

2.1 Normative

The following documents are incorporated into this RP to the extent specified herein. Users should apply the most recent editions of the references.

IEST-RP-CC018: Cleanroom Cleaning and Sanitization: Operating and Monitoring Procedures

IEST-RP-CC026: Cleanroom Operations

IEST-RP-CC023: Microorganisms in Cleanrooms

IEST-RP-CC052: Understanding, Identifying, and Controlling Electrostatic Charge in Cleanrooms and Other Controlled Environments

IEST-STD-1246: Product Cleanliness levels and Contamination Control Program

ISO 14644 Cleanroom and Associated Controlled Environments—Part 5: Operations

